GOVERNMENT OF INDIA
MINISTRY OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING
DEPARTMENT OF FISHERIES

LOK SABHA
UNSTARRED QUESTION NO. 1349
TO BE ANSWERED ON 11TH FEBRUARY, 2025

Genetically Modified Fish

1349. Shri Sudhakar Singh:

Will the Minister of FISHERIES, ANIMAL HUSBANDRY AND DAIRYING be pleased to state:

(a) whether the Government has introduced genetically modified (GM) fish in the country and if so, what are the details of the approval process, environmental risk assessments and safety protocols undertaken before such introduction;

(b) the measures are being taken to address the concerns of environmentalists, fisherfolk and scientists regarding the potential ecological and economic impacts of introducing GM fish into India's aquatic ecosystems;

(c) the strategy of the Government for the development and promotion of sustainable aquaculture practices, including seaweed farming, to enhance livelihoods, improve bio-diversity, and contribute to climate change mitigation; and

(d) the data on investments, initiatives and outcomes in seaweed cultivation and what steps are being taken to scale up its production and integrate it into the broader blue economy framework, State-wise?

ANSWER

THE MINISTER OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING
(SHRI RAJIV RANJAN SINGH ALIAS LALAN SINGH)

(a): The Department of Fisheries, Government of India has not introduced any genetically modified (GM) fish in the country.

(b): Does not arise.

(c): The Department of Fisheries, Government of India is implementing various schemes and programmes such as Pradhan Mantri matsya Sampada Yojana (PMMSY), Fisheries and Aquaculture Infrastructure Development Fund (FIDF), Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY) and Kishan Credit Card (KCC) for development of fisheries and aquaculture including seaweed cultivation. Under PMMSY, various activities have been taken up for promotion of sustainable aquaculture such as (i) Genetic Improvement Programme of commercially important species, establishment of Brood Banks, Brood Stock Multiplication Centres (BMCs), hatcheries and seed rearing units for quality seed production, (ii) Species diversification by promoting indigenous species, (iii) Establishment of feed mills for manufacture of quality fish feed, (iv) Strengthening cold chain and marketing infrastructure by establishing ice plants, cold storages, fish markets, fish kiosk, insulated fish transport vehicles, and (v) capacity building and training programmes for creation of skilled manpower in fisheries and aquaculture sector.

(d): Under the PMMSY, the Department of Fisheries, Government of India has approved the seaweed projects worth ₹194.09 crore, with a central share of ₹98.97 crore including support provided to beneficiaries for installation of 47,245 Rafts, 65,480 monolines/tubenets, establishment of a Multipurpose Seaweed Park, Seaweed Seedbank, Pre-feasibility Assessment study projects on seaweed farming, training and capacity building programs in various States and Union Territories (UTs). The Department of Fisheries, Government of India has taken up various activities for promotion of seaweed cultivation in coastal States and UTs under PMMSY such as (i) establishment of a Multipurpose Seaweed Park in Tamil Nadu, at a total project cost of Rs. 127.71 crore with central share of Rs.75.16 crore with objective to supply high quality planting materials to seaweed farmers, product innovation lab to develop new product lines, testing facility for quality testing of water and seaweed products, along with single window support for entrepreneurs and processors, (ii) establishment of Seaweed Brood Bank approved for supplying quality planting material to the farmers, (iii) establishment of seaweed cluster at Lakshadweep Islands with development of seaweed value chain including seed bank, cultivation units, processing and marketing, (iv) approved 47,245 units of rafts and 65,480 units of monoline/tubenet method at a cost of Rs.63.53 crore for seaweed cultivation to the beneficieries of various States and UTs. State-wise details of rafts and monoline/tubenets including inputs approved under PMMSY are furnished at Annexure-I.

In addition, 6 projects at a total cost of ₹ 465.07 lakhs have been approved for various ICAR and CSIR institutes, wherein 100% financial support is provided by the Department of Fisheries, Government of India. These projects are primarily relating to Pre-feasibility Assessment studies of Seaweed Cultivation, Ecological safeguards in Gulf-of-Mannar, initiation of seaweed cultivation along Maharashtra coast, Seaweed farming feasibility assessment and promotion along Gulf of Kutch, skilling, capacity building and pre-feasibility for seaweed cultivation in and around Kori Creek in Gujarat, project on Seed plant production for promoting extensive cultivation of *Kappaphycus alvarezii* along Tamil Nadu coast and another project on establishment of pilot scale farming of commercially valuable seaweeds in U.T. of Andaman and Nicobar Islands. The details of the Central Sector (CS) projects approved to various Institutes and States/UTs on Seaweed under PMMSY is provided at Annexure-II.

The NFDB has organized various exposure and training programs on seaweed cultivation for fishers, fish farmers and state/UT government officials. Besides, CSIR-CSMCRI has trained 2529 stakeholders (fishermen, industry, and entrepreneur) in total 63 training programmes conducted on Seaweed Cultivation and Processing Technology during 2017-2025. Besides, ICAR-CMFRI has conducted 102 training programs involving 7490 beneficiaries for promotion of seaweed cultivation during the last 3 years (2022-2024).

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Annexure-I

Statement referred to in reply of part (d) of Lok Sabha Unstarred Question No.1349 regarding Genetically Modified Fish for answer on 11th February, 2025: State-wise rafts and monoline/tubenet method approved for seaweed cultivation under PMMSY.

(i) Seaweed cultivation rafts including inputs

(Rs. In lakhs)

Sl. No.	State/UTs	Unit	Cost
1	Andhra Pradesh	26000	390.00
2	Karnataka	10000	150.00
3	Lakshadweep	500	9.00
4	Maharashtra	1000	15.00
5	Tamil Nadu	9745	146.18
	Total	**47,245**	**710.18**

(ii) Seaweed cultivation with Monoline/tubenet Method including inputs

(Rs. In lakhs)

Sl. No.	State/UTs	Unit	Cost
1	Andhra Pradesh	41200	3296
2	Gujarat	400	32
3	Karnataka	21000	1680
4	Lakshadweep	250	125
5	Tamil Nadu	2630	210.4
	Total	**65,480**	**5343.4**

(Rs. in lakh)

Establishment of a Multipurpose Seaweed Park in Tamil Nadu						
State/UT	**Financial Year**	**Total Project Cost**	**Central Share**	**State Share**	**Beneficiary Share**	**Anticipated Beneficiaries**
Tamil Nadu	2022-23	12771	7516	4894	360	700

Annexure-II

Statement referred to in reply of part (d) of Lok Sabha Unstarred Question No.1349 regarding Genetically Modified Fish for answer on 11th February, 2025: The details of Central Sector (CS) projects approved to various Institutes and States/UTs on Seaweed under PMMSY

Sl No.	Implementing agency/project proponent	Name of the project	Project cost (Rs. in lakh)
(i)	(ii)	(iii)	(v)
1	CSIR-Central Salt & Marine Chemicals Research Institute (CSMCRI)	Seed plant production for promoting extensive cultivation of *Kappaphycus alvarezii* along Tamil Nadu coast	53.185
2	UT of Andaman and Nicobar Islands	Pre-feasibility studies and establishment of pilot scale farming of commercially valuable seaweeds in Andaman Coast	82.74
3	(i). NCSCM, MoEF&CC, GoI. (ii). CSIR-CSMCRI (iii). ICAR-CMFRI	Joint study on seaweed cultivation potential and ecological safeguards in the Gulf of Mannar, Tamil Nadu	59.70
4	CSIR-Central Salt & Marine Chemicals Research Institute (CSMCRI)	Strategies to initiate seaweed cultivation along the coast of Maharashtra	121.31
5	ICAR – Central Marine Fisheries Research Institute (CMFRI)	Seaweed farming feasibility assessment and exploration of promotional activities along Kori, Padala and other selected locations along Kutch Coast, Gujarat	94.92
6	CSIR-Central Salt & Marine Chemicals Research Institute (CSMCRI)	Skilling, Capacity building, and Pre-feasibility Assessment of Seaweed Cultivation in and around Kori Creek, Gulf of Kutch, Gujarat	53.22
		Total	**465.07**

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